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| INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99) | Application Number | | 10725904 |
| | Filing Date | | 2003-12-01 |
| | First Named Inventor | Walton | |
| | Art Unit | 2616 | |
| | Examiner Name | JAIN, RAJ K | |
| | Attorney Docket Number | 030412 | |

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| | 1 | 4750198 | | 1988-06-07 | Harper | |
| | 2 | 5509003 | | 1996-04-16 | Snijders et al. | |
| | 3 | 5982327 | | 1999-11-09 | Vook et al. | |
| | 4 | 6351499 | | 2002-02-26 | Paulraj et al. | |
| | 5 | 6363267 | | 2002-03-26 | Lindskog et al. | |
| | 6 | 6731668 | | 2004-05-04 | Ketchum | |
| | 7 | 6940917 | | 2005-09-06 | Menon et al. | |
| | 8 | 7006464 | | 2006-02-28 | Gopalakrishnan et al. | |

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|--|----|---------|--|------------|---------------|--|
| | 9 | 7095709 | | 2006-08-22 | Walton et al. | |
| | 10 | 7164669 | | 2007-01-16 | Li et al. | |

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|-------------------|---------|--------------------|------------------------|------------------|---|--|
| | 1 | 20020154705 | | 2002-10-24 | Walton et al. | |
| | 2 | 20030125040 | | 2003-07-03 | Walton et al. | |
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|-------------------|---------|--------------------------------------|---------------------------|------------------------|------------------|---|--|--------------------------|
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|--|----|--------------|----|--|------------|---------------------------------------|--|--------------------------|
| | 3 | 1207635 | EP | | 2002-05-22 | Lucent Technologies Inc. | | <input type="checkbox"/> |
| | 4 | 2300337 | GB | | 1996-10-30 | ERICSSON Ge MOBILE COMMUNICATIONS INC | | <input type="checkbox"/> |
| | 5 | 2006-0095576 | KR | | 2006-08-31 | Qualcomm, Inc. | | <input type="checkbox"/> |
| | 6 | 2201034 | RU | | 2003-03-20 | TELEFONAKTIEBOLAG ET LM ERIKSSON | | <input type="checkbox"/> |
| | 7 | 01076110 | WO | | 2001-10-11 | Qualcomm, Inc. | | <input type="checkbox"/> |
| | 8 | 02025853 | WO | | 2002-03-28 | IOSPAN Wireless, Inc. | | <input type="checkbox"/> |
| | 9 | 02078211 | WO | | 2002-10-03 | Qualcomm, Inc. | | <input type="checkbox"/> |
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| 1 | INTERNATIONAL SEARCH REPORT-PCT/US04/038198; INTERNATIONAL SEARCH AUTHORITY-EUROPEAN PATENT OFFICE, 04/04/05 | <input type="checkbox"/> |
| 2 | ALAMOUTI, S.M., "A Simple Transmit Diversity Technique for Wireless Communications," IEEE Journal on Select Areas in Communications, Vol.16, No.8, October 1998, pgs.1451-1458 | <input type="checkbox"/> |
| 3 | CHEN et al., "Novel Space-Time Processing of DS/CDMA Multipath Signal," IEEE 49th, Vehicular Technology Conference, Houston, Texas, May 16-20, 1999, pgs. 1809-1813 | <input type="checkbox"/> |
| 4 | CHOI et al., "MIMO Transmit Optimization for Wireless Communication Systems," Proceedings of the First IEEE International workshops on Electronic Design, Piscataway, New Jersey, January 29-31 (2002) | <input type="checkbox"/> |
| 5 | FUJII MASAOKI, "Pseudo Orthogonal Multibeam Time Transmit Diversity for OFDM-CDMA" pgs.222-226 | <input type="checkbox"/> |
| 6 | HAUSTEIN et al., "Performance of MIMO Systems with Channel Inversion," IEEE 55th, Vehicular Technology Conference, Birmingham, Alabama, May 6-9 (2002), pgs. 35-39 | <input type="checkbox"/> |
| 7 | HONG et al., "Robust Frequency Offset Estimation for Pilot Symbol Assisted Packet CDMA with MIMO Antenna Systems," IEEE Communications Letters, vol. 6, no. 6:262-264 (June 2002) | <input type="checkbox"/> |
| 8 | JOHAM et al., "Symbol Rate Processing for the Downlink of DS-CDMA Systems", IEEE JOURNAL ON SELECTED AREAS IN COMMUNICATIONS, IEEE SERVICE CENTER, PISCATAWAY, US, vol. 19, no. 1, 1 January 2001 (2001-01-01), XP011055296, ISSN: 0733-8716, paragraphs 1, 2, 4, 5. | <input type="checkbox"/> |
| 9 | PAUTLER et al., "On Application of Multiple-Input Multiple-Output Antennas to CDMA Cellular Systems," IEEE 54th, Vehicular Technology Conference Proceedings, Atlantic City, New Jersey, October 7-11 (2001), pgs. 1508-1512 | <input type="checkbox"/> |
| 10 | TARIGHAT et al., "Performance analysis of different algorithms for cdma2000 antenna array system and a new multi user beamforming (MUB) algorithm", WIRELESS COMMUNICATIONS AND NETWORKING CONFERENCE, 2000. WCNC. 2000 IEEE E 23-28 SEPTEMBER 2000, PISCATAWAY, NJ, USA, IEEE, vol.1, 23 September 2000 (2000-09-23), pages 409-414. XP010532534. ISBN: 978-0-7803-6596-4, Paragraphs 2, 3. | <input type="checkbox"/> |
| 11 | THEON et al., "Improved Adaptive Downlink for OFDM/SDMA-Based Wireless Networks," IEEE VTS 53rd, Vehicular Technology Conference, Rhodes, Greece, May 6-9, (2001) | <input type="checkbox"/> |

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| 12 | TUJKOVIC, "High bandwidth efficiency space-time turbo coded modulation", Institute of Electrical and Electronics Engineers, ICC 2001. 2001 IEEE International Conference on Communications, Conference Record, Helsinki, Finland, June 11-14, 2001, IEEE International Conference on Communications, New York, NY: IEEE, US, vol. 1 of 10, 11 June 2001 (2001-06-11), pgs 1104-1109, XP010553500 | <input type="checkbox"/> |
| 13 | ZELST et al., "Space Division Multiplexing (SDM) for OFDM Systems," IEEE 51st, Vehicular Technology Conference Proceedings, Tokyo, Japan, May 15-18 (2000) | <input type="checkbox"/> |
| 14 | IEEE 802.11a, "Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) specifications: High-Speed physical Layer in the 5GHZ Band", September 1999 | <input type="checkbox"/> |

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